# ASSIGNMENT 2

Textbook Assignment: "The Data Display Group AN/UYA-4(V)", chapter 3, pages 3-1 through 3-24.

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2-1. Which of the following is NOT a function of the Data Display Group AN/UYA-4(V)?

1. Sensor data distribution and display
2. Transmission of data to remote platforms
3. Tactical data distribution and display
4. Data display group simulation and testing

2-2. Sensor data is made up of which of the following types of data?

1. Ship's heading
2. Video signals only
3. Antenna position only
4. Both 2 and 3 above

2-3. In the AN/UYA-4(V) display system, what is the correct path for radar antenna position data?

1. RAC, radar, RDDS, consoles
2. Radar, RDDS, RAC, consoles
3. Radar, RAC, RDDS, consoles
4. Consoles, RDDS, RAC, radar

2-4. In the AN/UYA-4(V) display system, what is the correct path for radar video signals?

1. Radar, RDDS, consoles
2. Radar, RAC, RDDS, consoles
3. Radar, RDDS, RAC, consoles
4. Consoles, RAC, radar

2-5. What is the function of a radar azimuth converter?

1. To convert radar azimuth to synchro signals
2. To convert digital radar azimuth to synchro radar azimuth
3. To convert radar azimuth data to radar video signals
4. To convert radar antenna position to the digital format used by the AN/UYA-4(V) display consoles.

2-6. Which of the following signals is/are used to create the sweep display on the AN/UYA-4(V) display consoles?

1. $\Delta X$ and $\Delta Y$ pulse trains only
2. Sign of $\Delta X$ and $\Delta Y$ only
3. Both 1 and 2 above
4. Digital

2-7. Which of the following signals is/are used to determine the quadrant in which the sweep will be displayed on the AN/UYA-4(V) display consoles?

1. $\Delta X$ and $\Delta Y$ pulse trains only
2. Sign of $\Delta X$ and $\Delta Y$ only
3. Both 1 and 2 above
4. Digital

2-8. Which of the following signals is/are sent to the CDS computer as a digital data word?

 1. $\Delta X$ and $\Delta Y$ pulse trains only
 2. Sign of $\Delta X$ and $\Delta Y$ only
 3. Both 1 and 2 above
 4. Digital

2-9. The $\Delta X$ and $\Delta Y$ pulse trains are normally developed from what trigonometric function?

 1. Sine of the antenna angle only
 2. Cosine of the antenna angle only
 3. Both 1 and 2 above
 4. Tangent of the antenna angle

IN ANSWERING QUESTIONS 2-10 AND 2-11, REFER TO FIGURE 3-3 AND TABLE 3-1 IN THE TEXT.

2-10. Using the illustrated RAC, in what position should the MODE SELECTOR switch be placed for normal operation?

 1. OPERATE
 2. $\Delta\theta$ STEP
 3. RESET
 4. CONTINUOUS

2-11. Using the illustrated RAC, in what position should the MODE SELECTOR switch be placed to generate a continuous simulated radar sweep?

 1. OPERATE
 2. $\Delta\theta$ STEP
 3. RESET
 4. CONTINUOUS

2-12. What device receives output from the radar azimuth converter?

 1. RAC
 2. RDDS
 3. Radar
 4. Console

2-13. What total number of separate video signals may the RDDS receive from a sensor?

 1. One
 2. Two
 3. Three
 4. Four

2-14. What total number of sensors can input into the RDDS?

 1. 6
 2. 10
 3. 11
 4. 24

2-15. What total number of standard AN/UYA-4(V) display consoles can receive output from an RDDS?

 1. 6
 2. 10
 3. 11
 4. 24

2-16. Which of the following RDDS outputs can be selected by remote control from the display console?

 1. Symbology
 2. Sensor only
 3. Video level only
 4. Both 2 and 3 above

2-17. In the event of a AN/UYA-4(V) display console control signal casualty, which of the following console inputs can be manually selected at the RDDS?

1. Symbology
2. Sensor only
3. Video level only
4. Sensor and video level

2-18. Tactical data is digital data transmitted to or received from the CDS computer by the display system.

1. True
2. False

2-19. Which of the following data words identifies the type of Symbol, line, or circle to be displayed?

1. EF
2. Address
3. v/c
4. X/Y Coordinate

2-20. Which of the following data words defines the center point of a symbol?

1. EF
2. Address
3. v/c
4. X/Y Coordinate

2-21. Which of the following data words is used to interrogate display consoles?

1. EF
2. Address
3. v/c
4. X/Y Coordinate

2-22. Which of the following data words identifies a particular console to receive message data?

1. EF
2. Address
3. v/c
4. X/Y Coordinate

2-23. Which of the following data words is used to generate speed and direction leader for symbols?

1. $\Delta X/\Delta Y$
2. Range/bearing
3. X/Y Coordinate
4. Velocity/category

2-24. For an air track symbol, 1 inch of leader indicates what speed?

1. 1080 mph
2. 33.8 mph
3. 1080 knots
4. 33.8 knots

2-25. Which of the following data words is used to define the length and direction of a line?

1. $\Delta X/\Delta Y$
2. Range/bearing
3. X/Y Coordinate
4. Velocity/category

2-26. The 48-label readout word is used to perform which of the following functions?

1. To light the CCAEP switch labels only
2. To energize/deenergize the PPI buzzer only
3. Both 1 and 2 above
4. To define DDI data to be displayed

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2-27. Display messages to be sent to a particular console must be preceded by which of the following data words?

1. ΔX/ΔY
2. Address
3. X/Y Coordinate
4. 48-label readout

2-28. Output messages to the display consoles are composed of how many computer words?

1. 1 only
2. 2 only
3. 10 only
4. 1 or more, depending on the type of message

2-29. To display a symbol and leader on all consoles, which of the following display message should be outputted by the computer?

1. Lines message
2. Normal message
3. Addressed lines message
4. Addressed normal message

2-30. To display a line on a particular console, how many data words will be in the output message?

1. 1
2. 2
3. 3
4. 4

2-31. In a standard circle message, which of the following data words defines the diameter of the circle?

1. Velocity/category
2. ΔX/ΔY coordinate
3. X/Y coordinate
4. Address

2-32. When programmable circle and ellipse messages are used, how many different diameter programmable circles and ellipses may be generated?

1. 256
2. 512
3. 1024
4. 2048

2-33. When an offset message is outputted, which of the following data words indicates the amount of offset in the sweep and the symbols of the addressed console?

1. X/Y coordinate
2. ΔX/ΔY coordinate
3. Address
4. Offset coordinate

2-34. Display consoles are normally divided into 2 or more groups with what maximum number of consoles per group?

1. 6
2. 8
3. 10
4. 12

2-35. In a display system that uses a waveform symbol generator, what is the total number of symbol generators installed?

1. One for the whole system
2. Two for the whole system
3. Four for the whole system
4. One for each pulse amplifier output channel

IN ANSWERING QUESTIONS 2-36 AND 2-37, REFER TO FIGURE 3-14 IN THE TEXT.

2-36. With the DATA SOURCE switch in the position shown, what are the sources of the display groups' tactical data?

1. Display groups 1 and 2 from computer 1
2. Display groups 1 and 2 from computer 2
3. Display group 1 from computer 1 and display group 2 from computer 2
4. Display group 1 from computer 2 and display group 2 from computer 1

2-37. With the SYMBOL SOURCE switch in the position shown, what are the sources of display groups 1 and 2 symbol waveforms?

1. Display group 1 and 2 from symbol generator 1
2. Display group 1 and 2 from symbol generator 2
3. Display group 1 from symbol generator 1 and display group 2 from symbol generator 2
4. Display group 1 from symbol generator 2 and display group 2 from symbol generator 1

2-38. On a plan position indicator (PPI), what is the maximum number of symbols that may be display on a 10.7-inch CRT?

1. 1,000
2. 1,500
3. 2,000
4. 2,500

2-39. The CRT presentation of sensor data and symbology is controlled from which of the following panels?

1. The display control panel
2. The DDI front panel
3. The 6-by-7 panel
4. The CRT control panel

2-40. On the CCAEP, what total number of switches have fixed labels?

1. 3
2. 6
3. 18
4. 24

2-41. On the CCAEP, what total number of switch positions have 48-label readouts?

1. 3
2. 6
3. 18
4. 24

2-42. On the CCAEP, which of the following actions or functions controls what label will be lighted for the 48-label readout switches?

1. Console operator action
2. The computer program
3. The PPI firmware
4. The symbol generator

2-43. The function codes generated by the 6-by-7 panel vary with the console mode.

1. True
2. False

2-44. The 6-by-7 panel provides which of the following functions?

1. Ball tab control
2. Category selection only
3. Numeric data entry only
4. Both 2 and 3 above

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2-45. The console can provide the operator access to what maximum number of communications systems?

1. One
2. Two
3. Three
4. Four

2-46. When the interphone is used, what total number of consoles may be linked together for voice and pointer communications?

1. 6
2. 10
3. 12
4. 15

2-47. Which of the following console communications devices accesses the console into the ship's sound-powered communications networks?

1. Radio
2. Interphone
3. Sound power phone
4. Secure voice communications switchboard

2-48. Which of the following console communications devices provides the operator access to ship-to-ship and ship-to-aircraft communications?

1. Radio
2. Interphone
3. Sound power phone
4. Right or left earphone

2-49. Which of the following is a function of the display console digital area?

1. Converts operator actions into input data words
2. Generates sensor sweep and video display
3. Receives symbol waveforms from the symbol generator
4. Generates intensity and deflection control voltages

2-50. The DDI can display what total number of ASCII characters?

1. 16
2. 64
3. 1, 024
4. 2, 000

2-51. In the internal video mode, the DDI displays a 525-line TV display.

1. True
2. False

2-52. The video signals simulator (VSS) provides which of the following simulated signals?

1. Video only
2. Sweep only
3. Video and sweep only
4. Video, sweep and symbols

2-53. Which of the following VSS functions are controlled by the computer?

1. Generation of video signals
2. Selection of antennal rotation speed
3. Selection of source radar and video level
4. Generation of synchro azimuth and triggers

2-54. The VSS is used in place of or in conjunction with a shipboard two-dimensional radar.

1. True
2. False

2-55. When a ship's radar is used as a source of antenna position data and triggers, the VSS receives the signals from which of the following devices?

1. RDDS
2. Radar's RAC
3. Radar directly
4. Radar's RAC via the RDDS

2-56. Which of the following groups of switches controls the synchro azimuth and trigger output of the VSS?

1. Simulated video
2. Simulated radar
3. Computer control
4. Live radar source

2-57. Output data from the computer defines which of the following simulated video characteristics?

1. Azimuth only
2. Azimuth and range only
3. Azimuth, range and intensity only
4. Azimuth, range, intensity, and bandwidth

2-58. Under which of the following conditions does the VSS send the simulated video signal to the RDDS?

1. When the simulated video data is being received from the computer
2. When the digital sweep data is received form the RAC
3. When the stored simulated video data matches the digital sweep data
4. When the simulated radar antenna switch is on

2-59. Which of the following VSS video outputs is made up of simulated tracks intermixed with live video?

1. Live video
2. Mixed video
3. Simulated video

2-60. Which of the following VSS video outputs is isolated from the simulator?

1. Live video
2. Mixed video
3. Simulated video

2-61. Which of the following VSS video outputs is made up of computer generated video only?

1. Live video
2. Mixed video
3. Simulated video

QUESTIONS 2-62 THROUGH 2-65 PERTAIN TO VSS SWITCHES.

2-62. Which switch is used to control the sharpness of the simulated video return?

1. SIMULATED VIDEO
2. VIDEO DURATION
3. IF BANDWIDTH
4. RADAR BEAMWIDTH DEGREES

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2-63. Which switch is used to control the pulse length of the simulated video return?

1. SIMULATED VIDEO
2. VIDEO DURATION
3. IF BANDWIDTH
4. RADAR BEAMWIDTH DEGREES

2-64. Which switch is used to provide manual control of the simulated video characteristics?

1. SIMULATED RADAR
2. SIMULATED VIDEO
3. COMPUTER CONTROL
4. LIVE RADAR SOURCE

2-65. Which switch is used to control the sector width of the simulated video return?

1. SIMULATED VIDEO
2. VIDEO DURATION
3. IF BANDWIDTH
4. RADAR BEAMWIDTH DEGREES

2-66. The TMG can operate in what total number of operating modes?

1. Three
2. Five
3. Seven
4. Nine

2-67. What is the maximum length display message that the TMG can simulate?

1. One word
2. Two words
3. Three words
4. Four words

2-68. The TMG is permanently installed the PA/SG cabinet.

1. True
2. False

QUESTIONS 2-69 THROUGH 2-72 PERTAIN TO TMG MODES.

2-69. Which mode repeats a four word (or less) message twice or twenty times a second?

1. Free run
2. Test pattern
3. Output data request
4. 2/20-cycles per second

2-70. Which mode generates one data word in response to each ODR?

1. Free run
2. Test pattern
3. Output data request
4. 2/20-cycles per second

2-71. Which mode repeats a four word (or less) message every 400 milliseconds?

1. Free run
2. Test pattern
3. Output data request
4. 2/20-cycles per second

2-72. Which mode displays 2 symbols repeated every 90-degrees?

1. Free run
2. Test pattern
3. Output data request
4. 2/20-cycles per second

2-73. The electronic plug-in circuit test set allows a technician to simulate normal operating conditions of AN/UYA-4(V) display system circuit assemblies during trouble-shooting, testing, alignment, or repair procedures.

1. True
2. False

2-74. Which of the following
software programs can-aid a
technician in locating a
fault in a display console?

1. Display console POFA
   only
2. Display console PEFT
   only
3. Display console POFA and
   PEFT
4. VSS POFA

2-75. Which of the following
functions is/are normally
tested by POFA?

1. Switch Functions only
2. Test patterns only
3. Trackball coordinates
   only
4. All the above

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